ABSTRACT OF THE DISCLOSURE

A process for producing a CED coating by cathodic electrodeposition of a coating on an electrically conductive substrate in a CED coating bath and thermal cross-linking of the CED coating film obtained, wherein before thermal cross-linking outside of the CED coating bath, the CED coating film is brought into contact with an aqueous preparation of at least one metal compound, wherein the at least one metal compound is a compound of a metal with an oxidation number of +2 or higher and is selected from the group consisting of compounds containing cations of the metal, compounds forming cations of the metal in aqueous medium, compounds containing cations containing the metal, compounds forming cations containing the metal in aqueous medium, compounds comprising outwardly neutral complexes of the metal, colloidal oxide of the metal and colloidal hydroxide of the metal, wherein the metal itself is selected from the group consisting of metals having atomic numbers of 20 to 83 with the express exclusion of chromium, arsenic, cadmium, antimony, mercury, thallium and lead.